Docket No.: 291508005US1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Steve Beck et al.

Application No.:	09/721,441	Confirmation No.:	2327
Filed:	November 22, 2000	Art Unit:	3622
For: DYNAMICALLY TARGETING ONLINE ADVERTISING MESSAGES TO USERS		Examiner:	J. D. Carlson

APPEAL BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

As required under § 41.37(a), this brief is filed within an acceptable extension period from two months of the Notice of Appeal filed in this case on January 24, 2005, and is in furtherance of said Notice of Appeal.

The fees required under § 41.20(b)(2), and any required petition for extension of time for filing this brief and fees therefor, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1206:

I.	Real Party In Interest
II	Related Appeals and Interferences
III.	Status of Claims
IV.	Status of Amendments

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I.   REAL PARTY IN INTEREST

The rights of the inventors in this application have been assigned to aQuantive, Inc., of Seattle, Washington, as recorded on July 9, 2004, at Reel 014831, Frame 0380.

II.   RELATED APPEALS, INTERFERENCES, AND JUDICIAL PROCEEDINGS

Appellants' legal representative and the real party in interest are unaware of any appeal or interference that will directly affect, be directly affected by, or have a bearing on the Board's decision in the present appeal.

III.   STATUS OF CLAIMS

A.   Total Number of Claims in Application

The application was originally filed with 29 claims. As of the Final Office Action mailed October 22, 2004, claims 15, 18-26, and 30-34 are pending in the application.

B.   Current Status of Claims

    1.   Claims canceled: 1-14, 16, 17, and 27-29;

    2.   Claims withdrawn from consideration but not canceled: 18-26;

    3.   Claims allowed: None;

    4.   Claims rejected: 15 and 30-34.

C.   Claims On Appeal

The claims on appeal are claims 15 and 30-34.

IV.   STATUS OF AMENDMENTS

Appellants did not file an Amendment after Final Rejection.

V.   SUMMARY OF CLAIMED SUBJECT MATTER

Appellants' claimed subject matter is directed to facilitating targeted advertising. (See, e.g., Specification at page 2, lines 8-13.) For example, Claim 15 is directed to a computer-readable medium encoded with a data structure used for grouping a user in a test group with other users so that a sequence of conditions associated with the group can be applied to determine appropriate advertisements for that user. (See, e.g., Specification at page 5, lines 14-18.) The data structure corresponds to a user and includes information identifying a test group that has been selected for the user. (See, e.g., Specification at page 2, lines 12-16.) This test group indicates a sequence of conditions that will be applied when an advertising request associated with the user is received. (See, e.g., Specification at page 2, line 26-page 3, line 4.) For each of the conditions in the sequence, the data structure also includes information identifying a treatment subgroup to which the user belongs. (See, e.g., Specification at page 2, lines 17-27.) This treatment subgroup indicates which of a plurality of advertising treatments will be applied when its corresponding condition is the first condition in the sequence that is satisfied. (See, e.g.,

Specification at page 2, line 26-page 3, line 4.) Claim 15 specifies that both the test group and the treatment subgroup are selected for the user "without regard for user profile information." (See, e.g., Specification at page 3, lines 22-29.)

Claims 30 and 31 are directed to a method for evaluating alternative advertising strategies. The method includes randomly selecting a sequence of conditions that will be applied when an advertising request associated with a user is received. (See, e.g., Specification at page 3, lines 22-29.) Each of these conditions is associated with an advertising message to present to the user. (See, e.g., Specification at page 2, lines 17-21.) This advertising message is presented to the user when its corresponding condition is satisfied first in the sequence. (See, e.g., Specification at page 2, line 26-page 3, line 4.) Thus, when an advertising request is received from a user, the randomly selected condition sequence is applied and the user is presented with the advertising message corresponding to the first condition of the sequence that is satisfied. (See, e.g., Specification at page 2, line 26-page 3, line 4.)

Claim 30 provides that satisfaction of the condition may be based on the user's profile information. (See, e.g., Specification at page 5, line 29-page 6, line 5.) Claim 31, which depends from claim 31, is additionally directed to aggregating results across groups and subgroups to assess the effectiveness of each group and subgroup. (See, e.g., Specification at page 7, line 21-page 8, line 2.)

Claims 32-34 are directed to a method of assigning users to advertising test groups and subgroups without reference to user profile information. For example, users are uniquely identified via an identifier in a received advertising request. If a user has yet to be associated with an advertising test group and subgroup, a test group is selected for that user, without reference to user profile information. (See, e.g., Specification at page 2, lines 12-16.) The user is assigned to the test group using the identifier contained in the received request. (See, e.g., Specification at page 2, lines 28-29.) A similar process is used to select an advertising test subgroup for the user. (See, e.g., Specification at page 3, lines

4-7.) Once the user has been assigned a test group and test subgroup, the method proceeds by applying a sequence of conditions associated with the test group/subgroup to the user's profile to determine whether a condition is satisfied, thereby allowing an advertisement to be selected for the user. (See, e.g., Specification at page 2, line 17-page 8, line 2.)

Claim 33 is additionally directed to aggregating results across groups and subgroups to assess the effectiveness of each group and subgroup. (See, e.g., Specification at page 7, line 21-page 8, line 2.) Claim 34 is additionally directed to selecting test groups and subgroups in an attempt to conform the relative sizes of such groups to predetermined relative sizes. (See, e.g., Specification at page 6, lines 19-23.)

VI. GROUNDS OF OBJECTION TO BE REVIEWED ON APPEAL

A. **Rejection/objection of claim 1 under 35 U.S.C. § 101:** Does claim 15 fail to set forth statutory subject matter when it recites a computer-readable medium encoded with a combination of specifically interrelated data elements, which, when employed in a computer, facilitates the targeting of advertising?

B. **Rejection of claims 15, 30, and 31 under 35 U.S.C. § 103(a):** Would it have been obvious to combine and modify the techniques disclosed in Langheinrich (U.S. 6,654,725) for providing customized advertisements shown as inline images and banners in web pages, and the techniques disclosed in Benson (US 6,470,079) for reporting on the volume of call traffic to particular directory numbers to arrive at appellants' methods and data structures for targeted advertising using a sequence of conditions to be satisfied?

C. **Rejection of claims 32-34 under 35 U.S.C. § 103(a):** Would it have been obvious to combine and modify the customized advertisements disclosed in Langheinrich, the call reporting disclosed in Benson, and the system and a process for targeting and delivering advertising, coupons, products, or informational content to users based upon

observed behavior disclosed in Lazarus (US 6,134,532) to arrive at appellants' methods and data structures for targeted advertising using a sequence of conditions to be satisfied?

VII.   ARGUMENT

A.   Rejection under 35 U.S.C. § 101

1.   Legal Requirements for Statutory Subject Matter

35 U.S.C. § 101 provides:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

MPEP § 2106(IV)(B)(1) provides further clarification with respect applying 35 U.S.C. § 101 to claims containing for computer-related subject matter. In maintaining his rejection of claim 15 under 35 U.S.C. § 101, the Examiner has, thus, turned to a section of MPEP § 2106(IV)(B)(1) that discusses the difference between "functional descriptive material" and "non functional descriptive material":

> In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. . . . "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

Thus, as long as a claimed computer-related material is considered "descriptive material" under the above definition, it "will be statutory in most cases" provided that it is recorded on some computer-readable medium.

However, in focusing on the above-quoted language, the Examiner has failed to acknowledge a subsection of MPEP § 2106(IV)(B)(1), which expressly states that certain types of computer-related subject matter claims are statutory _per se_. More specifically, MPEP § 2106(IV)(B)(1)(a), entitled "Functional Descriptive Material: "Data Structures" Representing Descriptive Material _Per Se_ or Computer Programs Representing Computer

Listings *Per Se*" , clearly states that "a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware, which permits the data structure's functionality to be realized, and is thus statutory."

2.   Claim 15 Constitutes Statutory Subject Matter *Per Se*

Under MPEP § 2106(IV)(B)(1)(a) (quoted above), because claim 15 is directed to a data structure encoded in a computer-readable medium, it is statutory subject matter *per se*, and the rejection under 35 U.S.C. § 101 is not proper.

3.   In Considering Whether the Claimed Subject Matter is "Functional" vs. "Nonfunctional" Descriptive Material, the Examiner has Failed to Establish a Case of Non-statutory Subject Matter with Respect to Claim 15

Because the subject matter of claim 15 is statutory subject matter *per se*, it is not necessary to revisit the issue of whether the claimed subject matter is "functional" versus "nonfunctional." However, even if it the *per se* rule did not apply, the subject matter of claim 15 is statutory because, as explained below, it is directed to functional descriptive material.

Examiner asserts that claim 15 is directed to non-statutory subject matter because it "merely sets forth a collection of data elements which are taken to be non-functional descriptive material and therefore provides only a mere-arrangement of data." (October 22, 2004 Office Action at page 3.) Further, the Examiner asserts that the subject matter of claim 15 is not directed to a data structure. Appellants disagree.

Claim 15 is clearly directed to a data structure that imparts functionality when employed as a computer component. First, the plain language of claim 15 specifically recites a data structure in its preamble, leaving no doubt that appellants fully intended this

claim to be interpreted as directed to aspects of a data structure (employing its ordinary meaning).

Second, the subject matter of claim 15 is not contrary to the definition of a "data structure" as provided in the MPEP, which states that a "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." (The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) As shown in Table A below, the claim language itself is rich with the specific data manipulation functions that the recited data elements (i.e., information identifying a test group and information identifying a treatment subgroup) support.

The physical/logical relationship between the two data elements is also clear, with the test group identification information and the treatment subgroup information being linked through a sequence of conditions common to both. More particularly, the test group identification information indicates which of a plurality of sequences of conditions will be applied when an advertising request originating with the user is received, while the treatment subgroup information pertains to each of the conditions within that sequence. Thus, the fact that claimed relationships exist between these two data elements cannot be denied.

Third, the following table illustrates how the claimed subject matter impart[s] functionality when employed as a computer component:

CLAIM ELEMENT	EXAMPLE OF CONVEYED FUNCTIONALITY
information identifying a test group to which the user belongs, the identified test group having been selected for the user without regard for user profile information, the identified test group indicating which of a plurality of sequences of conditions will be applied when an advertising request originating with the user is	*The recited "information" is used to identify a test group that has been selected for the user, which is in turn used to indicate which of a plurality of sequences of conditions to apply.*

received; and	
for each of the conditions of the indicated sequence of conditions, information identifying a treatment subgroup to which the user belongs, the identified treatment subgroup having been selected for the user without regard for user profile information, the identified treatment subgroup indicating which of a plurality of advertising treatments will be applied when the condition is the first condition in the sequence of conditions to be satisfied.	*The recited "information" is used to identify a treatment subgroup to which the user belongs, which in turn indicates which advertising treatments will be applied.*

TABLE A

Because the subject matter of claim 15 is both statutory *per se* and statutory because it includes functional descriptive material, appellants respectfully request that the rejection under 35 U.S.C. § 101 be reversed.

B.   Rejections under 35 U.S.C. § 103(a)

1.   Legal Requirements for Obviousness

35 U.S.C. § 103(a) provides:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

To reject claims as being obvious, "the examiner bears the initial burden of presenting a *prima facie* case of obviousness." *In re Rijckaert,* 9 F.3d 1531, 1532 (Fed. Cir. 1993). A *prima facie* case of obviousness is established "when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." *In re Bell,* 991 F.2d 781, 782 (Fed. Cir. 1993). The Examiner is not allowed to use hindsight gleaned from the invention itself to modify references. *Uniroyal, Inc. v. Rudkin-Wiley Corp.,* 837 F.2d 1044, 1050-51 (Fed. Cir. 1988). Furthermore, "[t]he mere fact that the prior art may be modified in the manner suggested

by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992). The Federal Circuit emphasized this point by stating that:

> Although a prior art device could have been turned upside down, that did not make the modification obvious unless the prior art fairly suggested the desirability of turning the device upside down.

In re Chu, 66 F.3d 262, 298 (Fed. Cir. 1994). Moreover, to establish a *prima facie* case of obviousness, the Examiner must point to aspects of the prior art reference (or references when combined) that teach or suggest *all* the claim limitations. *In re Royka*, 490 F.2d 981, 985 (CCPA 1974). Appellants respectfully request that the Examiner's rejection under 35 U.S.C. § 103 be reversed based on failure to establish a *prima facie* case of obviousness based on the above standards.

2.   The Applied References

a.   The Langheinrich Reference

In general, Langheinrich describes providing customized advertisements shown as inline images and banners in web pages. In rejecting claims 15 and 30-34, the Examiner refers to specific portions of Langheinrich, including: col. 1, lines 33-46; col. 1 line 64-col. 2, line 3; and col. 2, lines 26-30. These specific sections to which the Examiner refers are all found in the "Background" section of the Langheinrich reference. The Examiner does not reference portions of Langheinrich outside the Background section.

More specifically, Langheinrich describes "systems in use today . . . [that] allow advertisers to specify targeting constraints that limit the display of an advertisement banner to certain conditions, such as the type of browser software used or the time of day." (Langheinrich at col. 1, lines 34-38.) Langheinrich provides an example of such a system that "first filters out all non-applicable advertisements given the condition of the current request for a banner." (Langheinrich at col. 1, lines 39-41.) Any advertisements that

remain after the filtering are "selected randomly" for presentation as a banner. (Langheinrich at col. 1, lines 41-42.)

With respect to these systems, Langheinrich provides examples of conditions that may be applied in order to provide custom advertising. Some of these conditions are environmental and/or related to the type of system on which the advertisement will be displayed (e.g., type and version of browser, operating system, site originating the request, country, time of day, and day of week). (Langheinrich at col. 1, lines 43-44.) Some of the conditions apply to user specific data (e.g., age, gender, income, place of residence). (Langheinrich at col. 1, lines 44-47.) Also with respect to these systems, Langheinrich mentions mechanisms that may keep statistics on how well each advertisement performed under the present conditions. This information may then be used to select advertisements for presentation. (Langheinrich at col. 1 line 64-col. 2, line 3.)

In the Background Section, Langheinrich further mentions a need for improving then-current techniques for selecting "whom to target what advertisement to." (Langheinrich at col. 2, lines 26-30.) As disclosed, Langheinrich attempts to solve this need by providing a device including "means for performing a customization process which customizes the electronic advertisements to be delivered to each client" and by providing a method that includes "computing an overall display probability" for a request from a client system and "selecting an advertisement according to the display probability." (Langheinrich at col. 1, lines 54-56 and 65-68.)

b.   The Benson Reference

Benson describes reporting on the volume of call traffic to particular directory numbers made in response to advertising campaigns. In rejecting claims 15 and 30-34, the Examiner refers to specific portions of Benson that he finds relevant, including: col. 1, lines 28-45; col. 5, lines 19-28; and col., 13 lines 45-57.

For example, in the "Background" section, Benson describes attempts being made to identify which advertising campaigns are effective. One way to compare the effectiveness of different advertising campaigns for the same product is to use different "call in" telephone numbers for each campaign, and then determine which number was called most frequently. (Benson at col. 1, lines 28-35.) Benson also describes that automated systems that are "capable of providing the advertiser with tailored and accurate reports on which advertising campaigns are effective have eluded those skilled in the art." (Benson at col. 1, lines 37-40.)

As further described in col. 5, lines 19-28, Benson assumes that an advertiser can have multiple advertising campaigns running concurrently (each with its own unique "call-in" number). Benson's techniques can be used to determine which of those advertising campaigns is most effective during a given time period. Benson's techniques may result in a report being generated that "identifies the percentage of total calls" to each of the advertiser's campaigns, thus, allowing the advertiser to identify those advertising mechanism's that are most effective. (Benson at col. 13 lines 45-57.)

c.   The Lazarus Reference

Lazarus describes a system and a process for targeting and delivering advertising, coupons, products, or informational content to users based upon observed behavior. Lazarus describes that advertisements are selected for presentation to specific users based on profile information characterizing each user, such as the user's sex and age.

3.   Claims 15, 30, and 31 Are Not Obvious Over Langheinrich in View of Benson

By failing to point to specific aspects of the applied references that disclose each element of appellants' claims, and by failing to show some suggestion or motivation to combine reference, the Examiner has not established a case of *prima facie* obviousness with respect to claims 15, 30, and 31. In addition, claim 15 and claim 30 recite several

features that are not found in any of the applied references, either alone or in combination. Accordingly, a rejection of claims 15, 30, and 31 under 35 U.S.C. § 103 is improper and should be reversed. *In re Royka*, 490 F.2d 981, 985 (CCPA 1974).

"Test Groups" and Associated Claim Features

None of the applied reference (either alone or in combination) describes appellants' claim features relating to "test groups." In particular, claim 15 recites "information identifying a test group to which the user belongs, the identified test group having been selected for the user without regard for user profile information." For example, appellants' techniques may associate a user with a test group based on a "cookie" that is received by a web server as part of a client-side request (e.g., originating from the user's computer). (Specification at page 2, lines 10-14.)

In addition to erroneously denying that the manner in which a user is assigned to a test group is "a positive limitation in claim 15," the Examiner attempts to compare Benson's multiple advertising campaigns to appellants' "test groups," stating that it would have been obvious to have "randomly assigned web visitors having ad requests/opportunities to each of the plural campaigns (groups) so that each campaign/group may be simultaneously tested in a scientific manner." (October 22, 2004 Office Action at page 5.) However, with this comparison, the Examiner is conflating different concepts and reaching for subject matter that is simply not contained in the references; neither Benson, nor any of the other applied references disclose assigning users to advertisement campaigns, let alone assigning users to test groups.

First, there is no suggestion of grouping users in any of the references. To the contrary, Langheinrich discloses "performing a customization process which customizes the electronic advertisements to be delivered to each client system," thereby suggesting treating every user as an individual receiving customized results (as opposed to part of a group). (Langheinrich at col. 2, lines 54-56). Second, even if the applied references do

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disclose assigning users to advertisement campaigns, that action does not cover "information identifying a test group to which the user belongs," where the test group has been selected for the user "without regard for user profile information." Third, claim 15 qualifies a "test group" as "indicating which of a plurality of sequences of conditions will be applied when an advertising request originating with the user is received." Thus, the test group plays a role in indicating the conditions that will be applied to a particular advertising request. As is discussed in more detail in the paragraphs that follow, neither Langheinrich nor Benson mention any indicators relating to application of sequences of conditions. Accordingly, there is no analogy among these concepts, and the Examiner has failed in meeting his burden of identifying aspects of the references that disclose each of appellants' claim features.

"Treatment Subgroups" and Associated Claim Features

None of the applied reference (either alone or in combination) describes appellants' claim features relating to "treatment subgroups." In particular, claim 15 recites "information identifying a treatment subgroup to which the user belongs, the identified treatment subgroup having been selected for the user without regard for user profile information." As with appellants' claimed "test groups," there is no mention or suggestion in the applied references of a treatment subgroup to which a user may belong. It appears that the Examiner is attempting to rely on the "random selection of filtered ads" described in Langheinrich as disclosing this claim feature. However, random selection of filtered ads simply does not compare to "identifying a treatment subgroup" to which a user belongs. Appellants cannot see a connection, and the Examiner does not clearly describe one. Furthermore, unlike appellants' treatment subgroups, Langheinrich's filtered ads do not have the function of "indicating which of a plurality of advertising treatments will be applied when the condition is the first condition in the sequence of conditions to be satisfied."

"Sequences of Conditions" and Associated Claim Features

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Both claim 15 and 30 recite claim features relating to "sequences of conditions" or "condition sequences." For example, claim 15 recites a test group that indicates "which of a plurality of sequences of conditions will be applied when an advertising request originating with the user is received." Likewise, claim 30 recites "randomly selecting one of a plurality of different sequences of conditions to apply to the user when an advertising request is received for the user."

Both claim 15 and 30 further recite that the "sequences of conditions" include a condition that may be satisfied "first" relative to the other conditions in the sequence of conditions, and that this condition results in specified action. For example, claim 30 recites that, when a condition "is the first condition of the sequence that is satisfied by profile information for the user" one of a "plurality of different advertising messages associated with the condition" is randomly selected. Similarly, claim 15 recites "a treatment subgroup" that indicates "which of a plurality of advertising treatments will be applied when the condition is the first condition in the sequence of conditions to be satisfied." Various examples of "sequences of conditions" are shown in appellants' Specification with respect to Figures 3-5 (e.g., condition sequence includes "Purchased a Desktop?", "Drop Of at Order Page?", etc.).

The Examiner has not pointed to anything in the references relating to sequences of conditions as recited in appellants' claims or the associated claim features. For example, while Langheinrich provides specific examples of conditions that may be applied in order to provide custom advertising, Langheinrich does not disclose that these conditions relate to a sequence of conditions. Furthermore, unlike appellants' claims which are clear as to the specific application of a sequence of conditions, Langheinrich merely mentions the existence of techniques that filter out advertisements based on a single given condition, and does not provide any information on how a condition might be applied to filter out a request.

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Not only do the references fail to disclose anything comparable to appellants' condition sequences, but they also fail to disclose any indication of how such conditions might be selected (another limitation of claims 15 and 30). For example, claim 15 bases the sequence of conditions on test group, and claim 30 bases the sequence of conditions on random selection.

As discussed above, several features associated with claim 15 and 30 are missing from the applied references, whether viewed alone or in combination. In fact, the Examiner is explicitly asserting that some of appellants' claim features have no "positive limitations," an assertion that 35 U.S.C. § 103 simply does not permit. See *In re Wilson*, 424 F.2d 1382, 1385, 165 (CCPA 1970) ("All words in a claim must be considered in judging the patentability of that claim against the prior art."). Claim 15 and claim 30 recite several features that are not found in any of the applied references, either alone or in combination. Accordingly, the Examiner has failed to establish a case of *prima facie* obviousness with respect to claims 15, 30 and 31. See *In re Royka*, 490 F.2d 981, 985 (CCPA 1974) (indicating that each element must be present in order to establish a prima facie case of obviousness).

In addition, unless hindsight reconstruction is used, there is nothing in the teachings from the applied references that would have suggested the claimed subject matter to a person of ordinary skill in the art. The Examiner has also failed to identify any of the motivation to combine or extend the applied references. Accordingly, appellants respectfully request that the Board reverse the rejection of claims 15, 30, and 31 (noting that claim 31 depends from claim 30 and stands or falls with claims 15 and 30 for the purpose of this appeal).

4.   Claims 32-24 Are Not Obvious Over Langheinrich in View of Benson and Lazarus

By failing to point to specific aspects of the applied references that disclose each element of appellants' claims and by failing to show some suggestion or motivation to

combine reference, the Examiner has not established a case of *prima facie* obviousness with respect to claims 32-34. In addition, claim 32 recites several features that are not found in any of the applied references, either alone or in combination. Accordingly, a rejection of claims 32-34 under 35 U.S.C. § 103 is improper and should be reversed. *In re Royka*, 490 F.2d 981, 985 (CCPA 1974).

"Advertising Test Group" and Associated Claim Features

As described above with respect to claim 15, none of the applied reference (either alone or in combination) describes appellants' claim features relating to "test groups." For example, claim 32 recites several acts that are performed "if the user has not been added to an advertising test group and advertising test subgroup for the campaign." Much like claim 15, claim 32 recites that the user is assigned "to the selected advertising test group using the identifier contained in the received request," a function that the applied references clearly do not contemplate. Furthermore, claim 32 is clear that assigning the user to a test group is not based on user profile information, further distinguishing it from the applied references, including Lazarus. The fact that Lazarus selects ads for users based alone on user profiles (without first grouping users to determine appropriate conditions to apply) teaches away from appellants' test groups because Lazarus' techniques focus solely on individuals, and not groups.

"Advertising Test Subgroups" and Associated Claim Features

In addition to disclosing "advertising test groups," claim 32 also recites "advertising test subgroups" and associated claim features. For example, claim 32 recites, "selecting one advertising test subgroup among a plurality of advertising test subgroups that are associated with the advertising test group to which the user is assigned." As described above, the applied references simply do not disclose advertising test groups, let alone advertising test subgroups. The Examiner has provided no support to the contrary. In addition, both the claimed advertising test groups and the advertising test subgroups are

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selected "without reference to any profile information for the user," and are, instead, selected based on the identifier of the received request. Accordingly, Lazarus' "user profiling" techniques identified by the Examiner, actually teach away from appellants' groups and subgroups.

"Sequence of Conditions" and Associated Claim Features

As described above with respect to claims 15 and 30, none of the applied reference (either alone or in combination) discloses appellants' claim features relating to "sequences of conditions." For example, claim 32 recites "selecting an advertising test group among a plurality of advertising test groups, each advertising test group of the plurality corresponding to a different sequence of conditions" if the user has not yet been added to an advertising test group. The claim also specifies that this selection takes place without any reference to user profile information.

As discussed above, several features associated with claim 32 are missing from the applied references, whether viewed alone or in combination. Accordingly, the Examiner has failed to establish a case of *prima facie* obviousness with respect to claims 32-34. *In re Royka*, 490 F.2d 981, 985 (CCPA 1974). In addition, unless hindsight reconstruction is used, there is nothing in the teachings from the applied references that would have suggested the claimed subject matter to a person of ordinary skill in the art. The Examiner has also failed to identify any of the motivation to combine the applied references. Accordingly, appellants respectfully request that the Board reverse the rejection of claims 32-34 (noting that claims 33-34 depend from claim 32 and stand or fall with claim 32 for the purpose of this appeal).

VIII. CLAIMS

A copy of the claims involved in the present appeal is attached hereto as Appendix A. The claims in Appendix A include the amendments filed by appellants on January 23, 2004.

IX.   EVIDENCE

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the Examiner is being submitted.

X.   RELATED PROCEEDINGS

No related proceedings are referenced in Section II, above, or copies of decisions in related proceedings are not provided, hence no Appendix is included.

Please charge any deficiency in fees or credit any overpayment to our Deposit Account No. 50-0665, under Order No. 291508005US1 from which the undersigned is authorized to draw.

Dated: *May 24, 2005*   Respectfully submitted,

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APPENDIX A

Claims Involved in the Appeal of Application Serial No. 09/721,441

1-14.   (Cancelled)

15.   (Previously Presented) One or more computer memories collectively containing an advertising targeting data structure, comprising a plurality of entries, each entry corresponding to a user and containing:

information identifying a test group to which the user belongs, the identified test group having been selected for the user without regard for user profile information, the identified test group indicating which of a plurality of sequences of conditions will be applied when an advertising request originating with the user is received; and

for each of the conditions of the indicated sequence of conditions, information identifying a treatment subgroup to which the user belongs, the identified treatment subgroup having been selected for the user without regard for user profile information, the identified treatment subgroup indicating which of a plurality of advertising treatments will be applied when the condition is the first condition in the sequence of conditions to be satisfied.

16-17. (Cancelled)

16.   (Cancelled)

17.   (Cancelled)

18.   (Withdrawn) A method in a computer system for analyzing user targeting results, comprising:

for an advertising targeting program having a plurality of independent dimensions, selecting a dimension in which to perform a comparison;

for user targeting effectiveness metrics each having a value in each of the independent dimensions, aggregating the metrics for each value of the selected dimension; and

comparing the different values of the selected dimension by comparing the corresponding aggregated metrics.

19.   (Withdrawn) The method of claim 18 wherein the selected dimension is comprised of two or more testing groups each corresponding to a different user data analysis approach, and wherein the effectiveness of the different user data analysis approaches is compared.

20.   (Withdrawn) The method of claim 18 wherein the selected dimension is comprised of two or more advertising messages all displayed to users in the same segment, and wherein the effectiveness of the different advertising messages for users in the segment is compared.

21.   (Withdrawn) One or more computer memories collectively containing an advertising targeting result data structure reflecting the result of targeting using test groups, conditions for each test groups, and treatment subgroups for each condition, the data structure comprising:

for each distinct combination of (a) one of the test groups and (b) one treatment subgroup for each of the conditions for the test group, an advertising

effectiveness metric aggregated across all users that are assigned to the test group and the treatment subgroup for each of the conditions for the test group,

such that, to determine a level of effectiveness of the conditions of a test group, the effectiveness metrics for users assigned to that test group may be aggregated,

and such that, to determine a level of effectiveness of a treatment of a treatment subgroup, the effectiveness metrics for users assigned to that treatment may be aggregated.

22.   (Withdrawn) The computer memories of claim 21 wherein the effectiveness metric is click-throughs.

23.   (Withdrawn) The computer memories of claim 21 wherein the effectiveness metric is conversion rate.

24.   (Withdrawn) The computer memories of claim 21 wherein the effectiveness metric is average sales.

25.   (Withdrawn) The computer memories of claim 21 wherein the effectiveness metric is session length.

26.   (Withdrawn) The computer memories of claim 21 wherein the effectiveness metric is user registration rate.

27-29. (Cancelled)

30.   (Previously Presented) A method in a computing system for evaluating alternative advertising strategies, comprising:

for each of a plurality of users:

in the computing system, randomly selecting one of a plurality of different sequences of conditions to apply to the user when an advertising request is received for the user, and

in the computing system, for at least one of the conditions in the condition sequence selected for the user, randomly selecting one of a plurality of different advertising messages associated with the condition to present to the user when the condition is the first condition of the sequence that is satisfied by profile information for the user; and

each time an advertising request is received for one of the plurality of users:

in the computing system, applying to the user the condition sequence that was randomly selected for the user to identify the first condition of the sequence that is satisfied by profile information for the user, and

in the computing system, presenting the user the advertising message associated with the identified condition that was randomly selected for the user.

31.   (Previously Presented) The method of claim 30, further comprising:

in the computing system, generating an assessment of the effectiveness of the advertising messages presented to each user;

in the computing system, for each of the plurality of condition sequences, aggregating the effectiveness assessments of the users for whom the condition sequence was selected;

in the computing system, selecting as the most effective of the plurality of condition sequences the condition sequence having the highest aggregated effectiveness assessment;

in the computing system, for each of the plurality of advertising message, aggregating the effectiveness assessments of the users for whom the advertising message was selected; and

in the computing system, selecting as the most effective of the plurality of advertising messages the advertising message having the highest aggregated effectiveness assessment.

32.   (Previously Presented)   A method in a computing system for evaluating alternative advertising strategies, comprising:

in the computing system, receiving an advertising request for a user during the duration of an advertising campaign, the received request containing an identifier uniquely identifying the user;

if the user has not been added to an advertising test group and advertising test subgroup for the campaign:

in the computing system, without reference to any profile information for the user, selecting an advertising test group among a plurality of advertising test groups, each advertising test group of the plurality corresponding to a different sequence of conditions,

in the computing system, assigning the user to the selected advertising test group using the identifier contained in the received request,

in the computing system, without reference to any profile information for the user, selecting one advertising test subgroup among a plurality of advertising test subgroups that are associated with the advertising test group to which the user is assigned, each advertising test subgroup of the plurality corresponding to a different set of advertising messages to be presented in response to the application of the sequence of conditions corresponding to the advertising test group to which the user is assigned, and

in the computing system, assigning the user to the selected advertising test subgroup using the identifier contained in the received request;

in the computing system, applying to profile information for the user the sequence of conditions corresponding to the advertising test group to which the user is assigned to identify the first condition of the sequence that is satisfied; and

in the computing system, presenting to the user an advertising message associated with the identified condition that is among the set of advertising messages corresponding to the advertising test subgroup to which the user is assigned.

33.   (Previously Presented) The method of claim 32, wherein the acts of claim 32 are performed for a plurality of advertising requests received for a plurality of users, the method further comprising:

in the computing system, generating an assessment of the effectiveness of the advertising messages presented to each user;

in the computing system, for each of the plurality of condition sequences, aggregating the effectiveness assessments of the users for whom the condition sequence was selected;

in the computing system, selecting as the most effective of the plurality of condition sequences the condition sequence having the highest aggregated effectiveness assessment;

in the computing system, for each of the plurality of advertising message, aggregating the effectiveness assessments of the users for whom the advertising message was selected; and

in the computing system, selecting as the most effective of the plurality of advertising messages the advertising message having the highest aggregated effectiveness assessment.

34.   (Previously Presented) The method of claim 32 wherein the selecting acts are performed by, in the computing system, selecting an advertising test group and an advertising test subgroup that tend to conform the relative sizes of the advertising test groups and advertising test subgroups to predetermined relative sizes for the advertising test groups and advertising test subgroups.